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1996 Feature Article - How Does Father's Day Affect Retail Trade?

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INTRODUCTION

It appears that in recent years, the answer to this question depends upon the date in September when Father's Day is observed. If Father's Day falls well into September (say on the 3rd or later) then it is the Retail Trade in September which appears to be affected. But if, as occurred this year, Father's Day falls early in September, then Retail Trade in August appears to be larger than would otherwise have been expected, and September trade appears lower.

The evidence for this is not entirely conclusive, partly because it appears that the impact of Father's Day on Retail Trade is changing over time. This article presents some of the statistical evidence, to enable the reader to make their own empirical assessment of any systematic effects of Father's Day on Retail Turnover for August and September.

FATHER'S DAY PROXIMITY EFFECTS

The custom of Father's Day is observed each year on the first Sunday of September. This means that Father's Day may be observed on any one of the first seven days in September, as Table 1 indicates for the period 1960 to 2010.

TABLE 1. DATES OF FIRST SUNDAY IN SEPTEMBER DURING 1960 TO 2010

First day	1963	1968	1974	1985	1991	1996	2002	
Second day	1962	1973	1979	1984	1990	2001	2007	
Third day	1961	1967	1972	1978	1989	1995	2000	2006
Fourth Day	1960	1966	1977	1983	1988	1994	2005	
Fifth day	1965	1971	1976	1982	1993	1999	2004	2010
Sixth day	1964	1970	1981	1987	1992	1998	2009	
Seventh day	1969	1975	1980	1986	1997	2003	2008	

If the Father's day expenditure was on the day itself, then it would always be the September retail trade which was affected, and any systematic pattern would be included in the seasonal adjustment factors. Similarly, if the expenditure associated with Father's Day occurred well in advance, then the impact would always be in earlier months, and again the seasonal adjustment factors would accommodate this.

But if most Father's Day expenditure occurs in the last few days beforehand, then the effect will

move between September and August, depending upon how close Father's Day is to the start of September. In this case, the regular seasonal adjustment factors would "expect" the impact to be in September, because the "average" Father's Day falls far enough into September for this to be the dominant systematic feature over a span of several years. Occasions when Father's Day fell early in September would show up as blips in the seasonally adjusted series, with the August seasonally adjusted figure being above the trend, and the September one being lower.

METHOD AND INTERPRETATION OF CHARTS

By examining these blips an assessment can be made as to whether they behave in a systematic manner associated with the movement of Father's Day in the first week of September. Below 16 charts plot these blips for Total Retail Turnover for Australia, the six States and two Territories, and the seven broad Australian industry groups.

In this article the blips have been derived by dividing the seasonally adjusted series by the trend. This provides a multiplicative measure of any potential Father's Day effect, and is consistent with the conventional use of multiplicative seasonal adjustment factors for these series.

Note that the estimates for 1996 are subject to further revision for the next five years, and will be revised in the next few months as part of a seasonal reanalysis of this set of series.

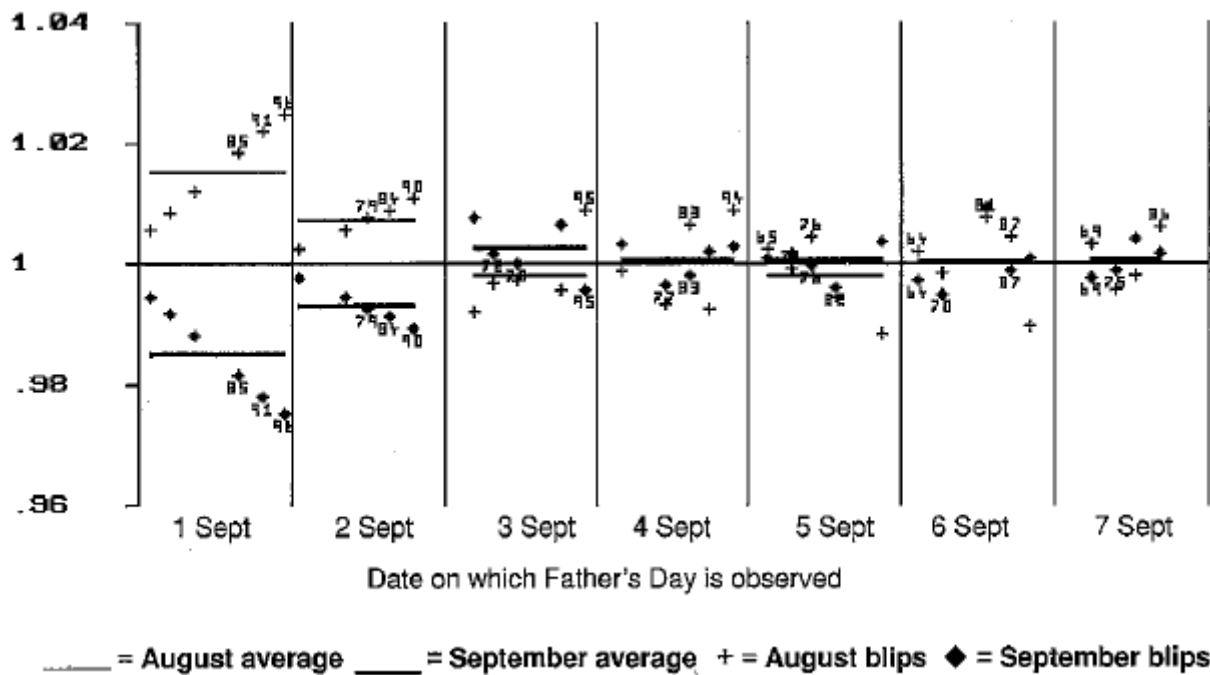
One way to examine these blips would be to plot the ratios, for August and September, over a number of years, and then use Table 1 to pick out the years when Father's Day fell on the first, the second, etc day of September. In the following charts, to make this simpler, the years have been "re-sorted", so that all the years when Father's Day falls on the first day of September are grouped together, then all the years when it falls on the second, and so forth. Thus each chart is divided into seven sub-charts.

If the blips appear to be randomly scattered about the unity line, the interpretation would be that no systematic Father's Day effect stands out in the presence of the volatile or irregular factors. However, if the August and September blips are consistently above or below the unity line in any sub-chart, then that could be interpreted as a systematic Father's Day effect. Horizontal lines (in each sub-chart) show the "average" August and September blips, to help display any such systematic behaviour. Examining the behaviour of the individual blips in a sub-chart about this average enables a visual assessment to be made of whether the systematic Father's Day effect is constant, or is changing over time.

Example

In the "Example" chart a set of results is presented to aid interpretation of the other charts. Examination of the "Example" sub-charts for the 3rd to the 7th of September suggests that the blips are randomly scattered about the unity line. However, the sub-charts for the 1st and 2nd of September disclose a systematic behaviour. In the first sub-chart the

GRAPH 1. RATIO OF SEASONALLY ADJUSTED RETAIL TURNOVER TO TREND, Example



August blips grow numerically larger over the years, while at the same time the September blips decline numerically in a compensatory manner. In the second sub-chart a similar phenomenon is observed, but the magnitude of the effect is smaller.

This hypothetical set of results is consistent with there being a Father's Day effect over and above that accounted for by the regular seasonal adjustment factors; one that is consistent with the hypothesis that the additional effect is confined only to the Friday and Saturday immediately prior to the Father's Day Sunday. Further, because the effect in the second sub-chart is less than half of that observed in the first sub-chart the results suggest that expenditure on the Saturday is greater than that on the Friday. Finally, the charts are consistent with the hypothesis that the effect is growing over the years considered.

OBSERVATIONS

In the actual sub-charts of Retail Turnover there does not appear to be any systematic effect when Father's Day falls on the 3rd of September, or later. This suggests that any systematic Father's Day effect is already incorporated into the regular seasonal adjustment factors. This is clearly apparent in the charts as the horizontal lines, representing the average August and September blips, are generally close to unity whenever Father's Day falls on the 3rd or later. Moreover, there is no consistent pattern relating August and September for individual years; sometimes the August blip is the larger of the two, and other years the September blip is larger.

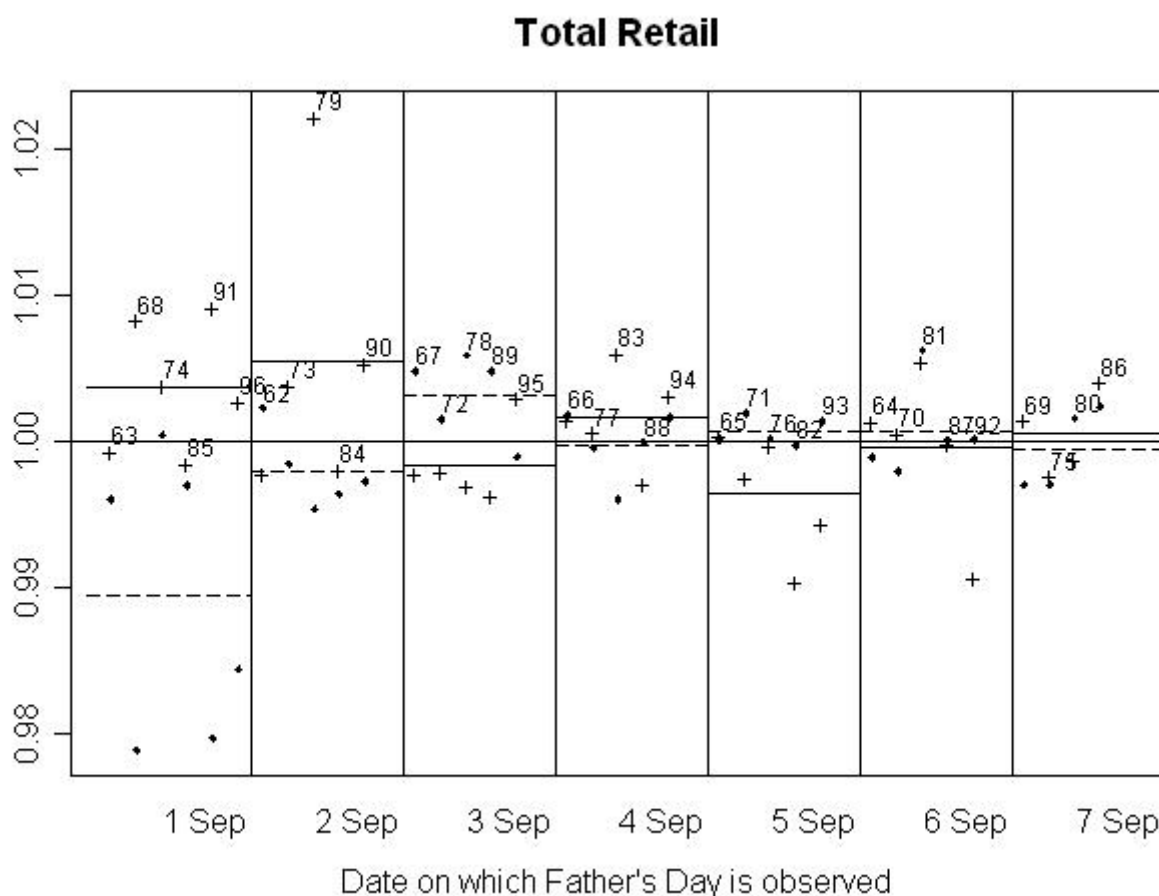
The sub-charts showing years when Father's Day fell on the 1st and 2nd of September are different. In these sub-charts the average August blip is greater than unity, and the average September blip is less than unity; exactly what would be expected if Father's Day was influencing the Retail Turnover in August. Moreover, the apparent average effect is greater when Father's Day falls on the 1st of September, than when it falls on the 2nd of September. Again this is consistent with a Father's Day "proximity effect".

The charts also reveal that the effect is a relatively recent phenomenon, and changing in strength. The "average" blips have been substantially influenced by the points for 1991 and 1996

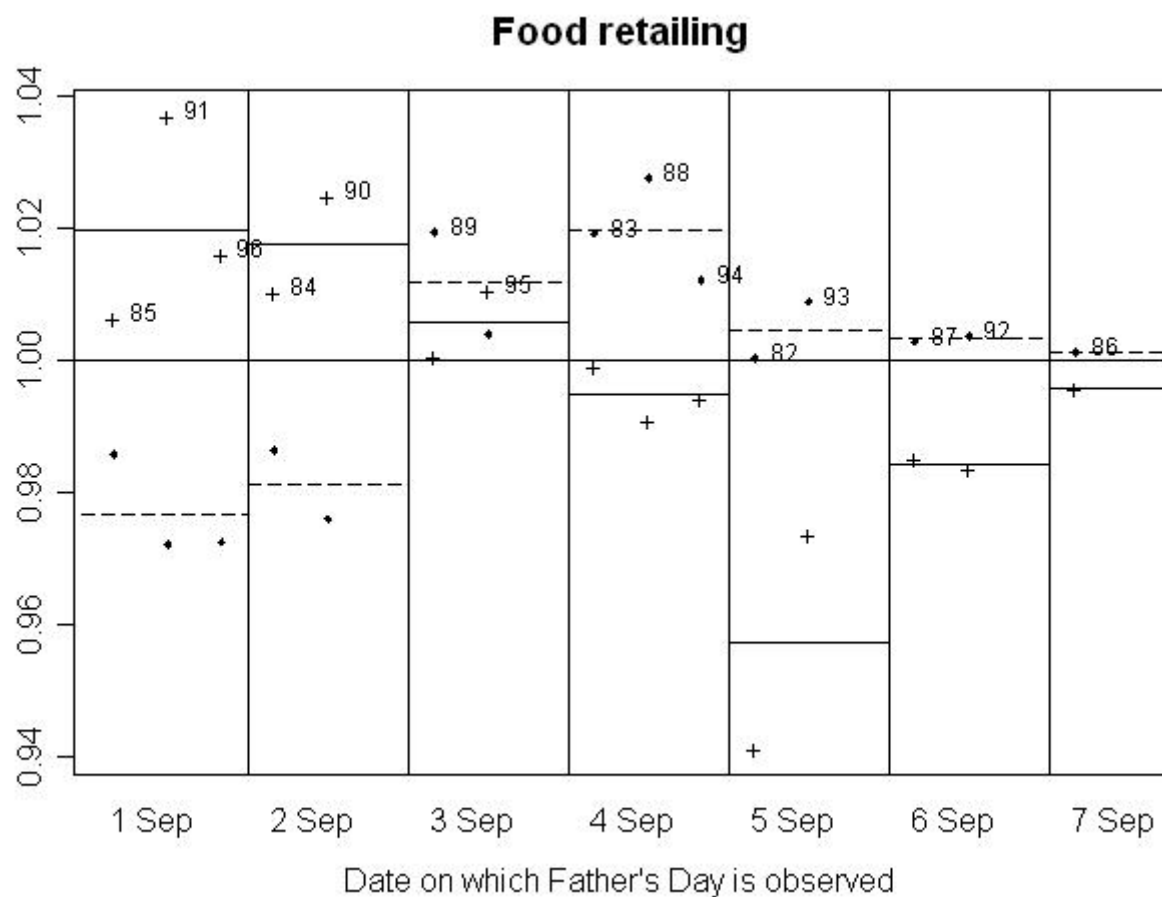
(when Father's Day fell on the 1st of September), and 1990 (when Father's Day fell on the 2nd). With data for these three years removed from the charts the evidence would be far less convincing. In statistical terms, 3 data points is rather limited information on which to detect an ongoing and systematically repeated effect that may be changing, so some caution should be exercised in attempting to estimate any such effect. Further observations to confirm the phenomenon will not be available until 2001 (when Father's Day falls on the 2nd) and 2002 (when it falls on the 1st). It will be interesting to observe if consumers purchasing, and retailers trading behaviours do maintain a pattern into the future.

The 1990, 1991 and 1996 effect does appear to be quite widespread, with the basic pattern described above being repeated in all seven broad industry groups, and in each State and Territory. This is a reasonably good indication that the effects observed in 1990, 1991 and 1996 are not random events, but instead are related to some underlying pattern of trading behaviour related to Father's Day.

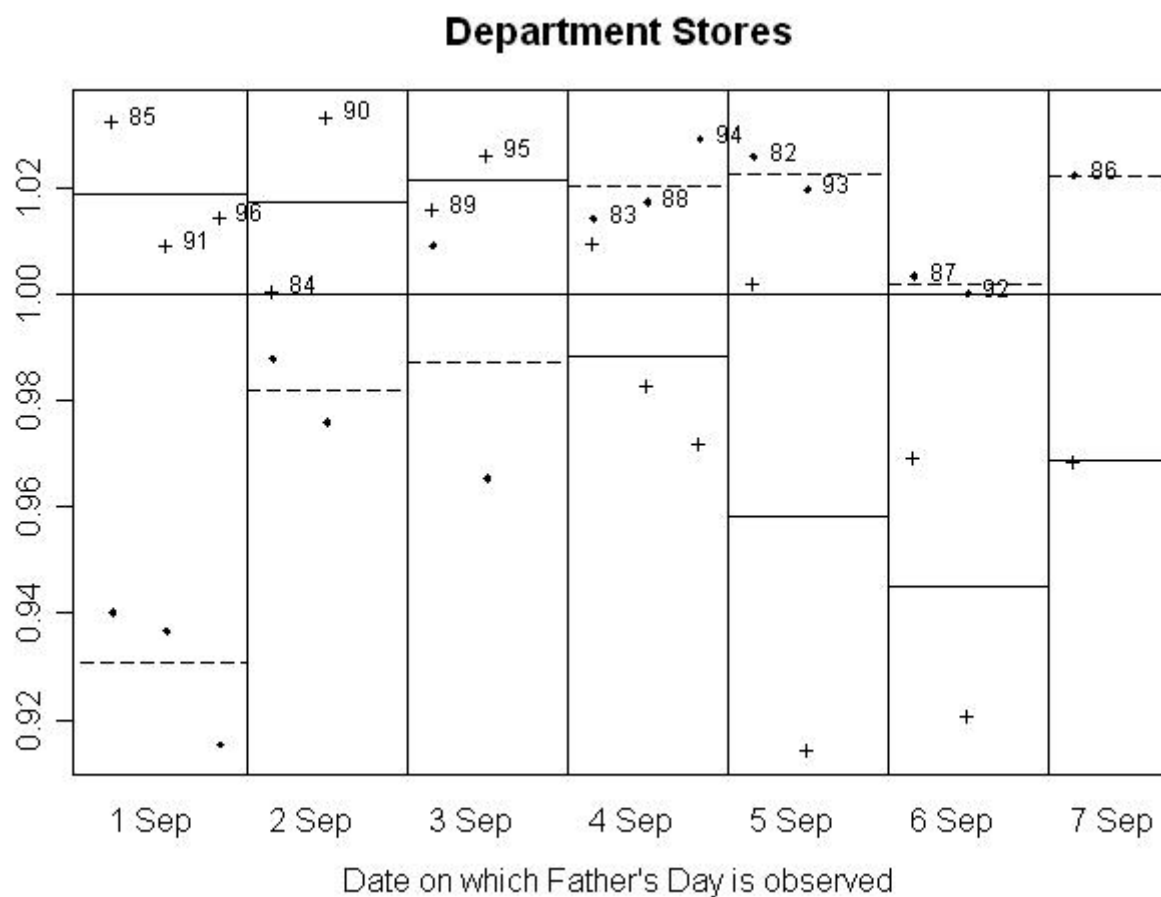
GRAPH 2. RATIO OF SEASONALLY ADJUSTED RETAIL TURNOVER TO TREND, Total retail



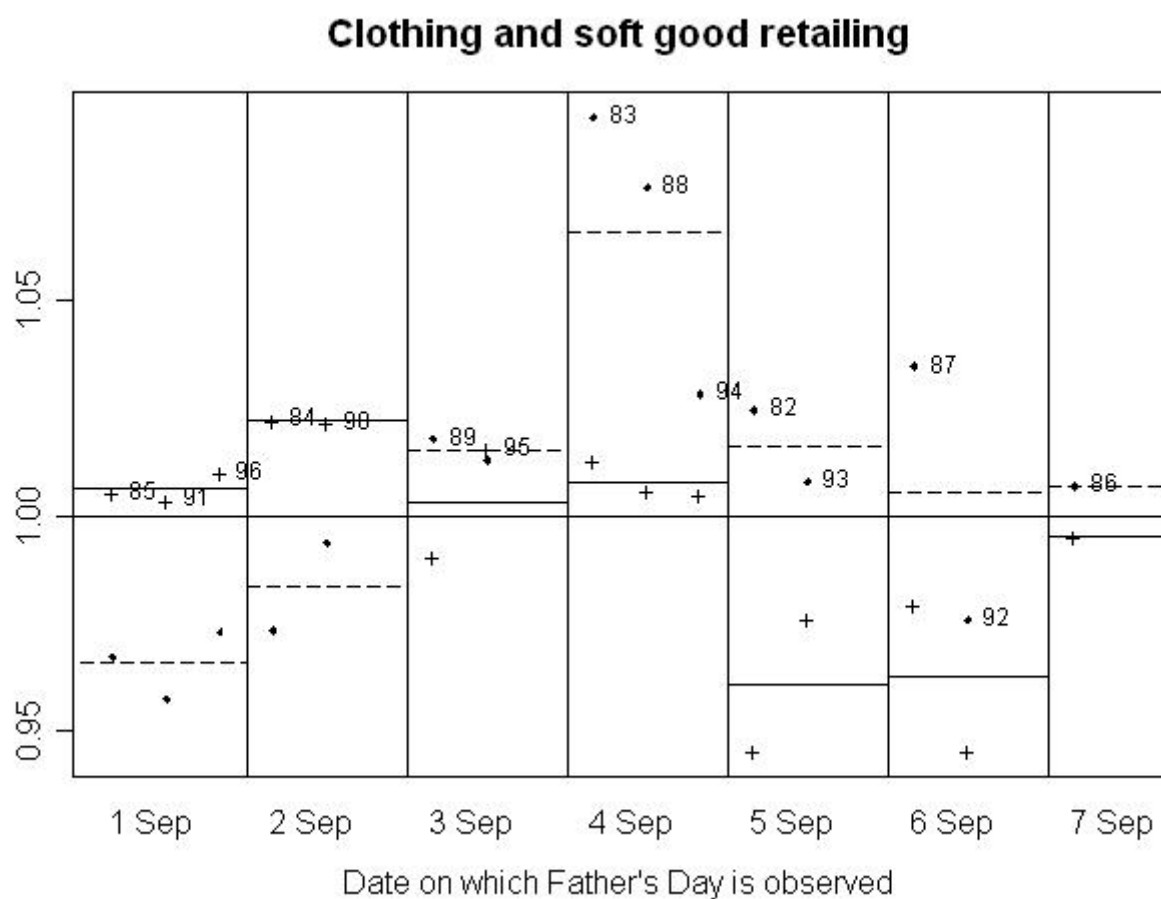
GRAPH 3. RATIO OF SEASONALLY ADJUSTED RETAIL TURNOVER TO TREND, Food retailing



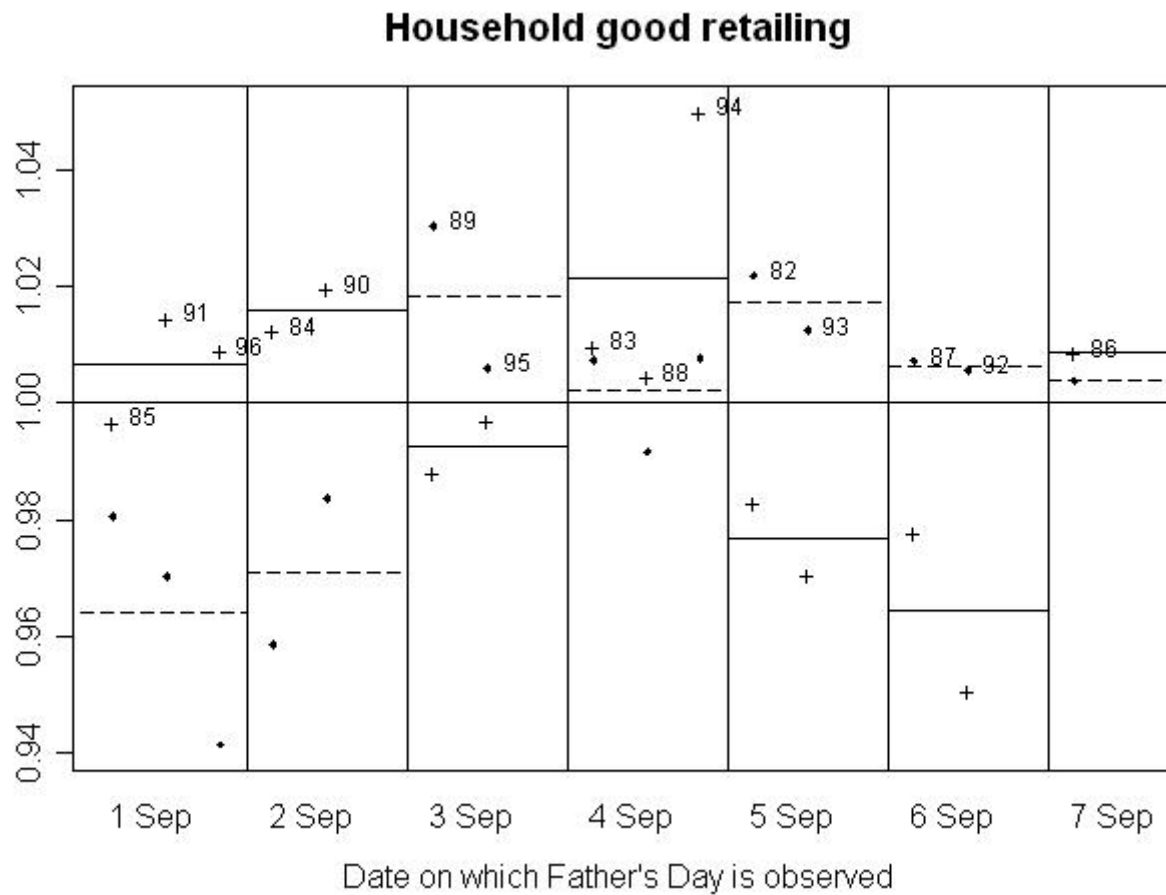
**GRAPH 4. RATIO OF SEASONALLY ADJUSTED RETAIL TURNOVER TO TREND,
Department Stores**



GRAPH 5. RATIO OF SEASONALLY ADJUSTED RETAIL TURNOVER TO TREND, Clothing and soft good retailing

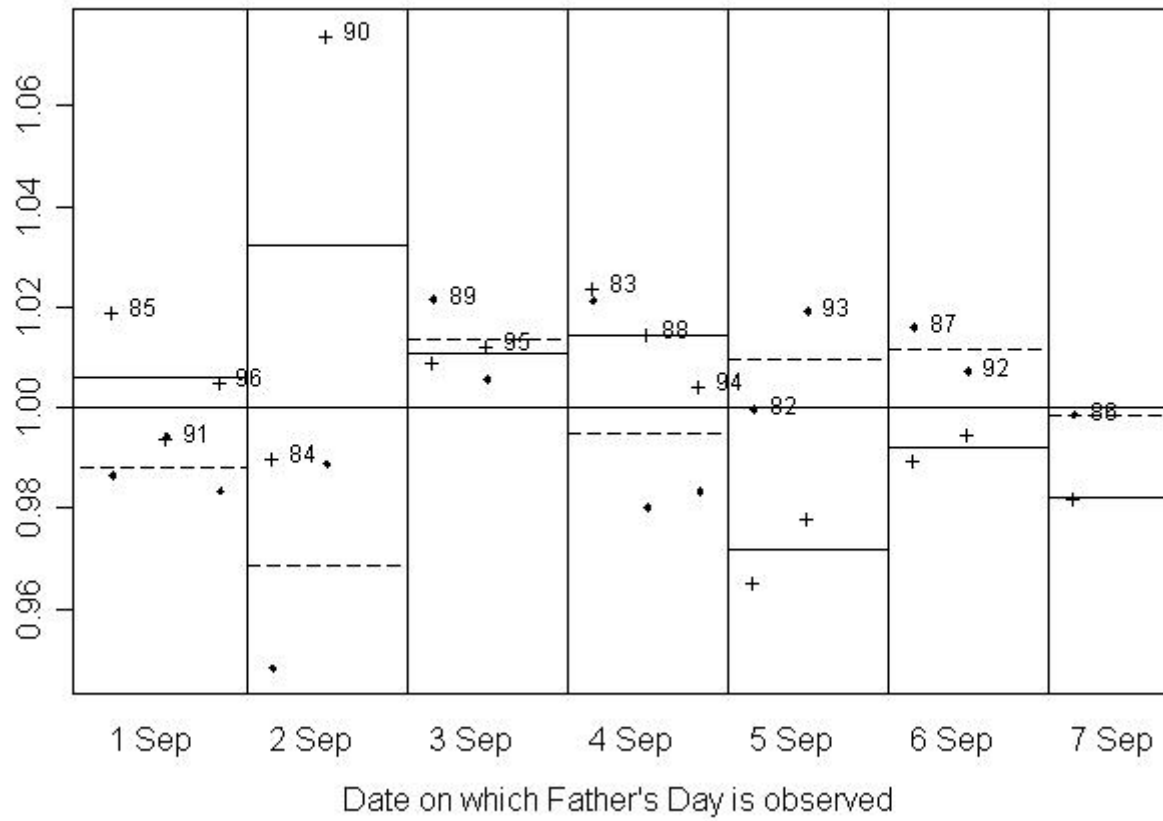


**GRAPH 6. RATIO OF SEASONALLY ADJUSTED RETAIL TURNOVER TO TREND,
Household good retailing**



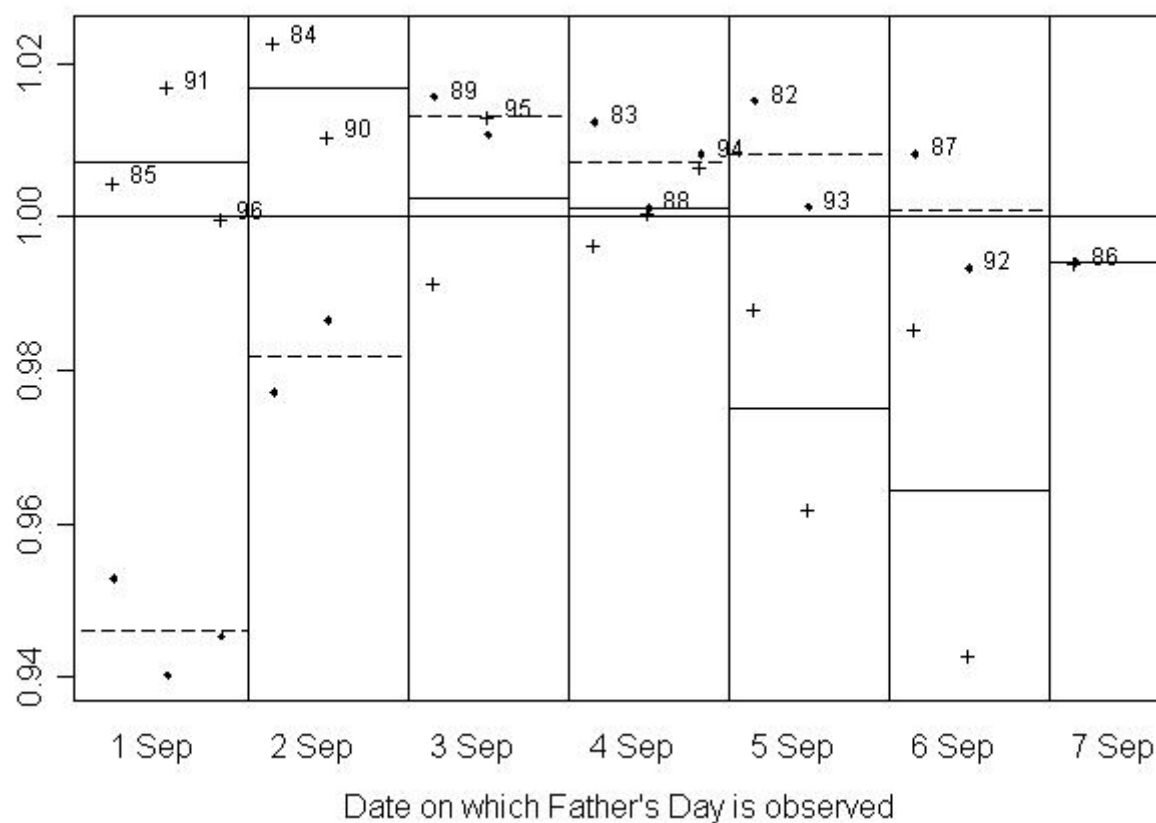
**GRAPH 7. RATIO OF SEASONALLY ADJUSTED RETAIL TURNOVER TO TREND,
Recreational good retailing**

Recreational good retailing



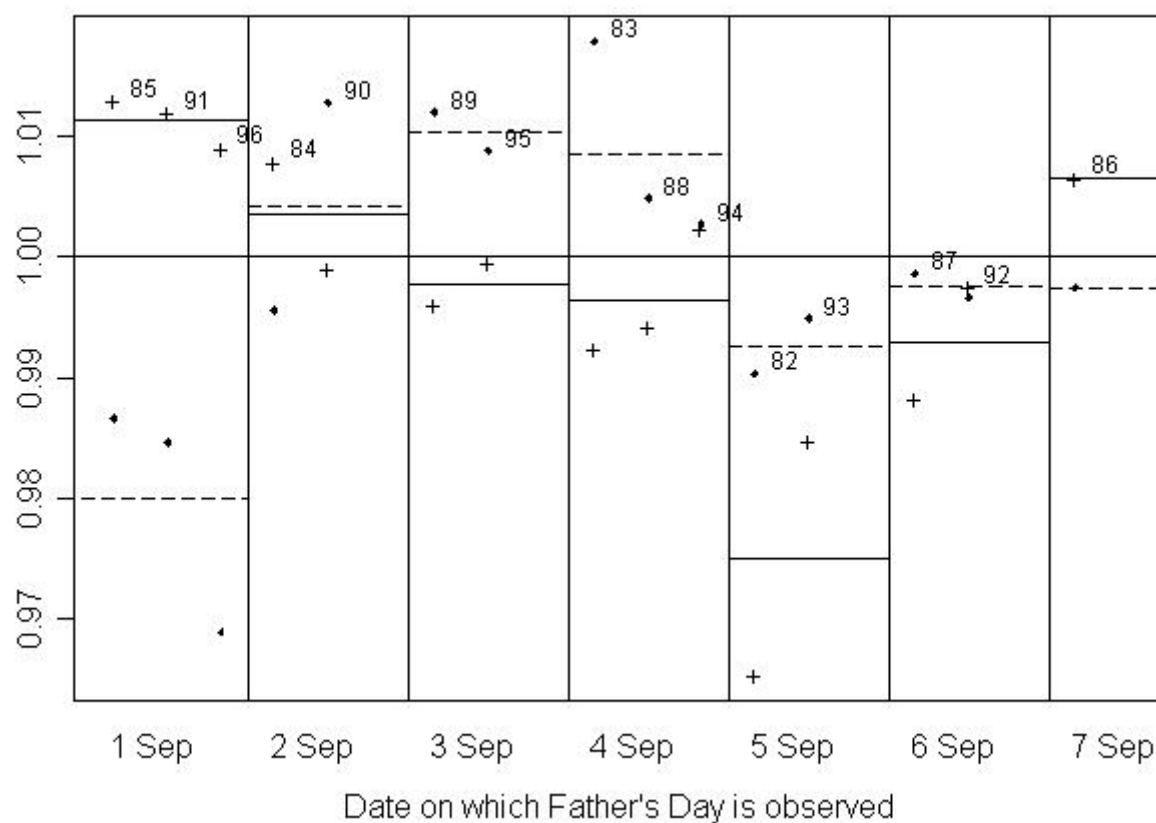
GRAPH 8. RATIO OF SEASONALLY ADJUSTED RETAIL TURNOVER TO TREND, Other retailing

Other retailing

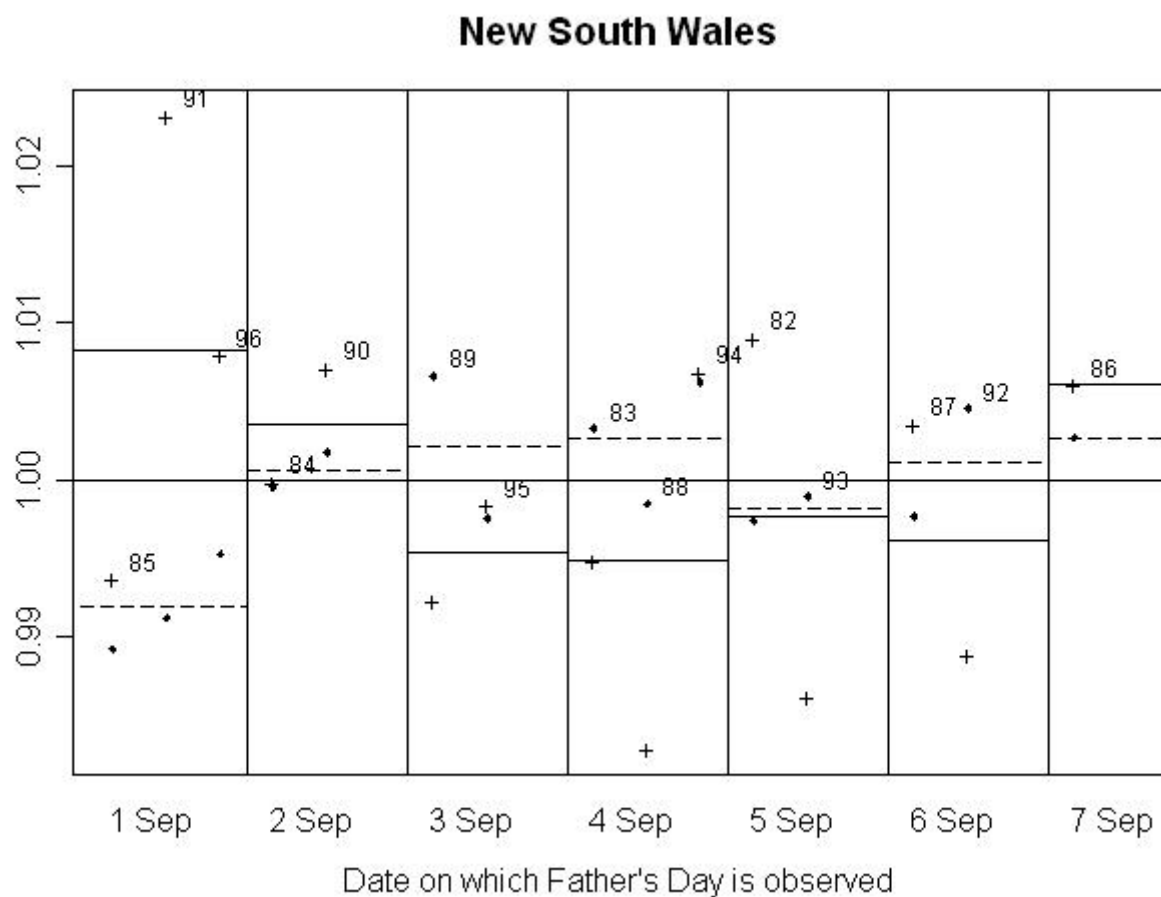


GRAPH 9. RATIO OF SEASONALLY ADJUSTED RETAIL TURNOVER TO TREND, Hospitality and services

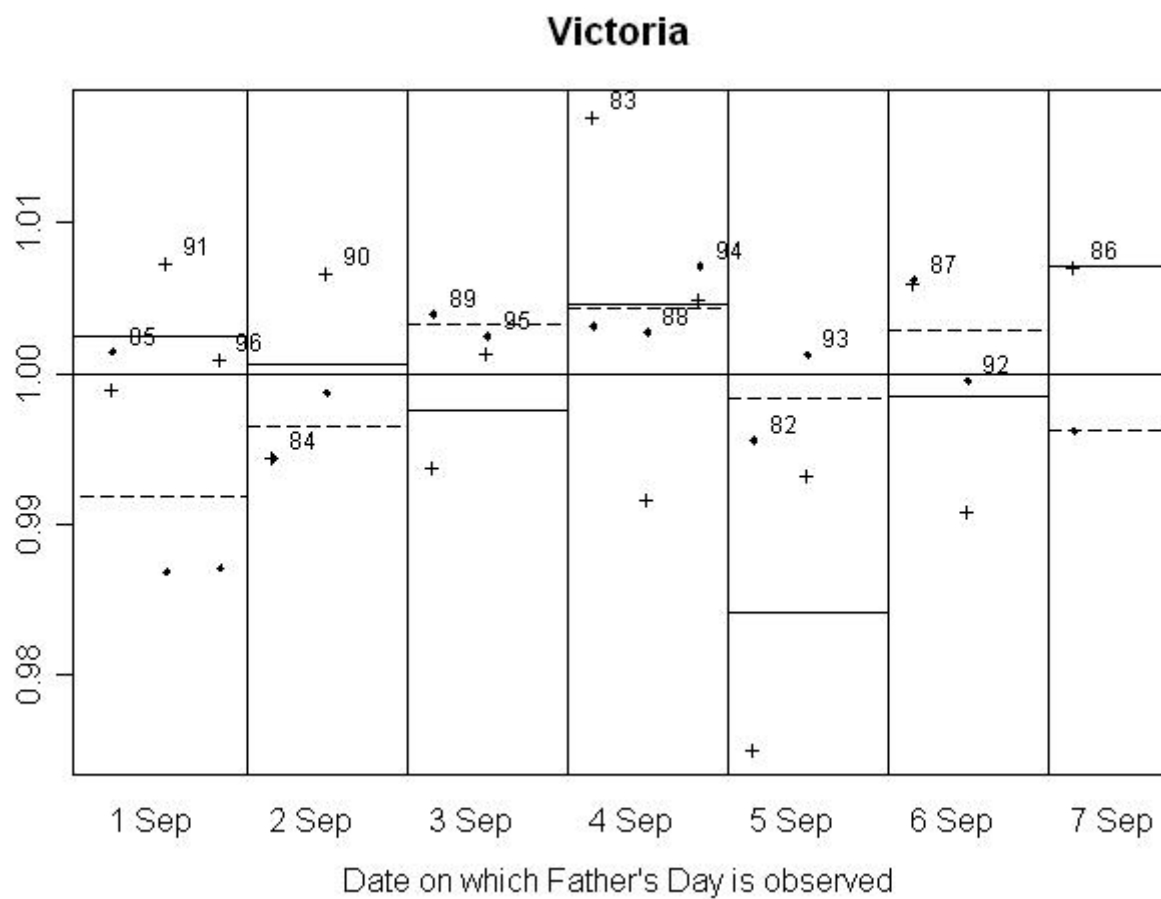
Hospitality and services



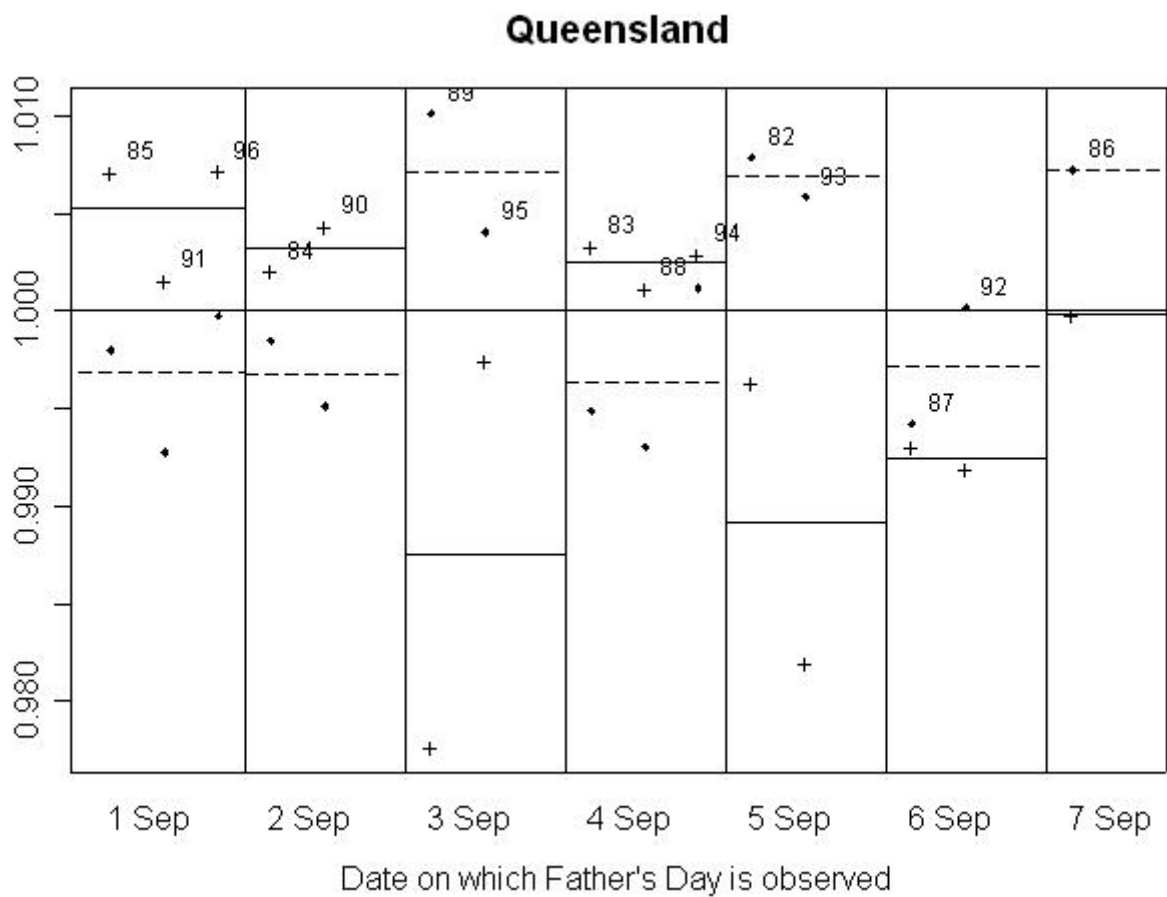
GRAPH 10. RATIO OF SEASONALLY ADJUSTED RETAIL TURNOVER TO TREND, New South Wales



GRAPH 11. RATIO OF SEASONALLY ADJUSTED RETAIL TURNOVER TO TREND, Victoria

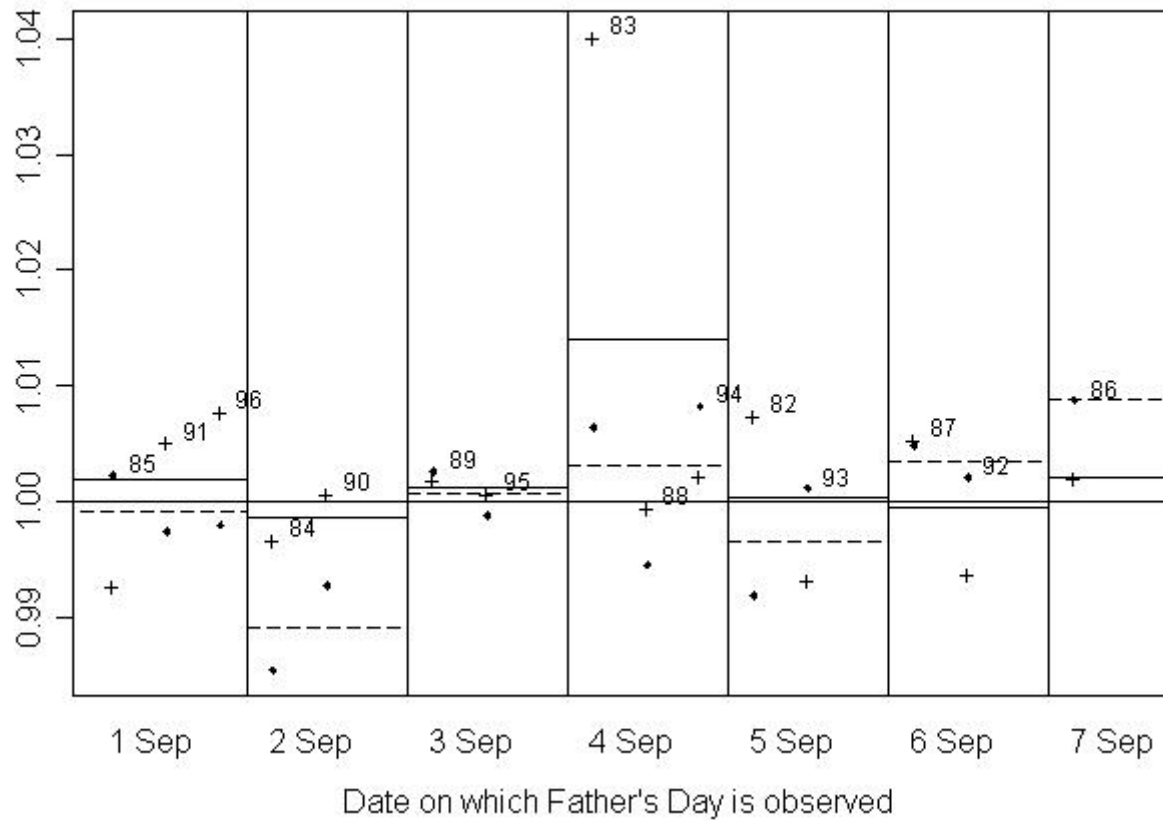


GRAPH 12. RATIO OF SEASONALLY ADJUSTED RETAIL TURNOVER TO TREND, Queensland



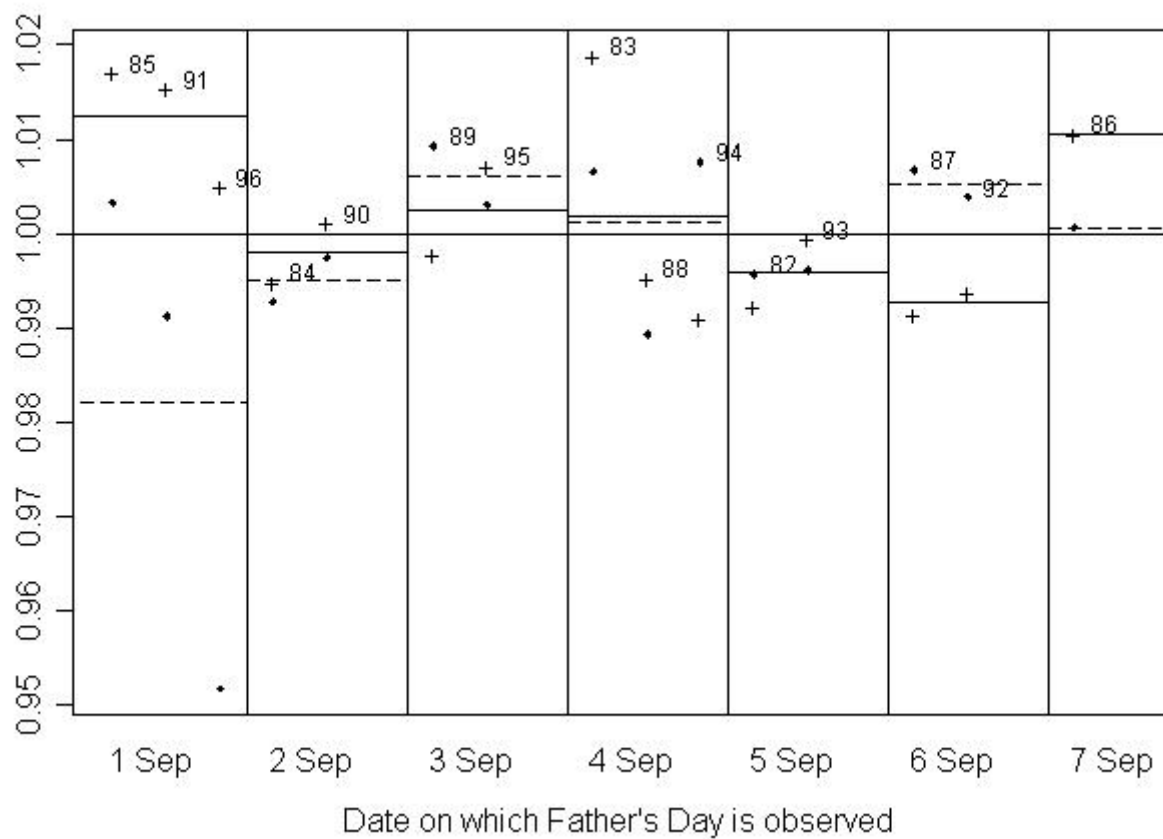
GRAPH 13. RATIO OF SEASONALLY ADJUSTED RETAIL TURNOVER TO TREND, South Australia

South Australia

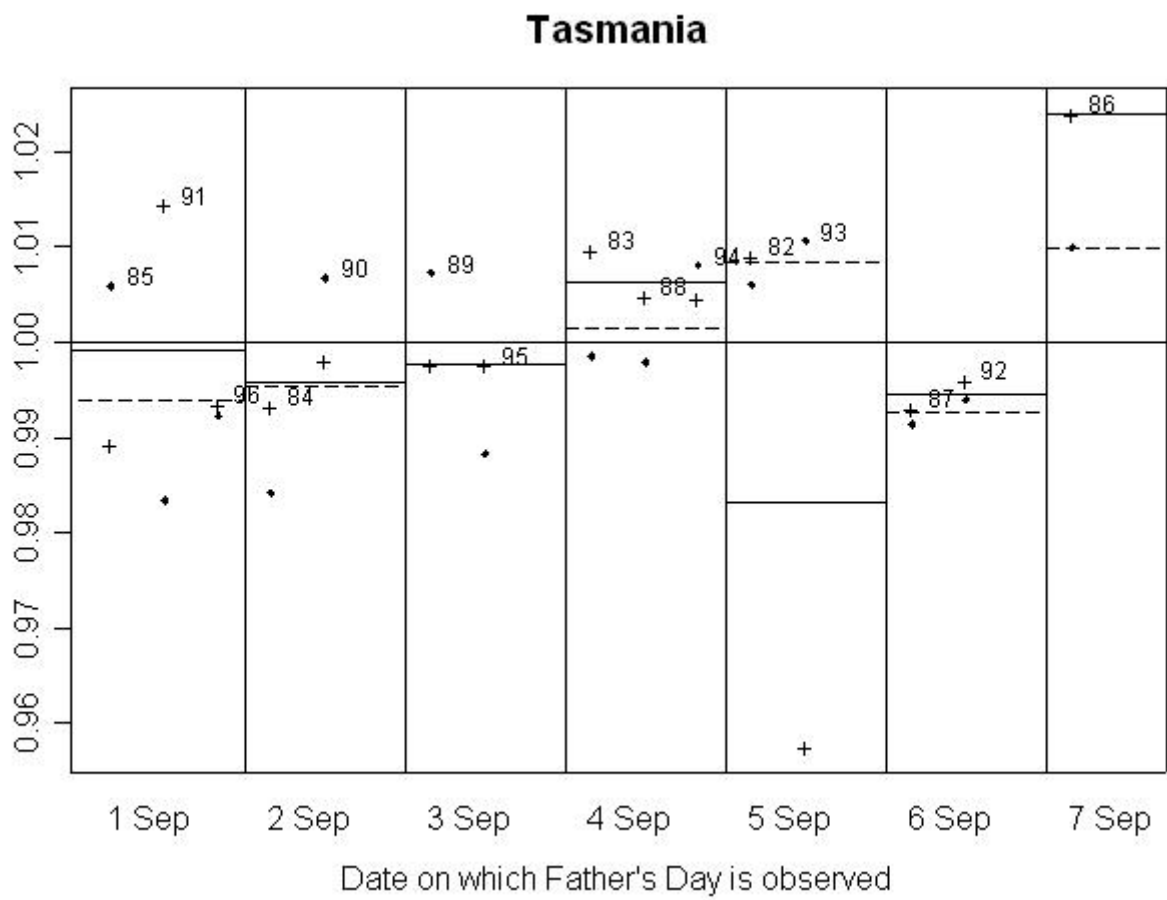


GRAPH 14. RATIO OF SEASONALLY ADJUSTED RETAIL TURNOVER TO TREND, Western Australia

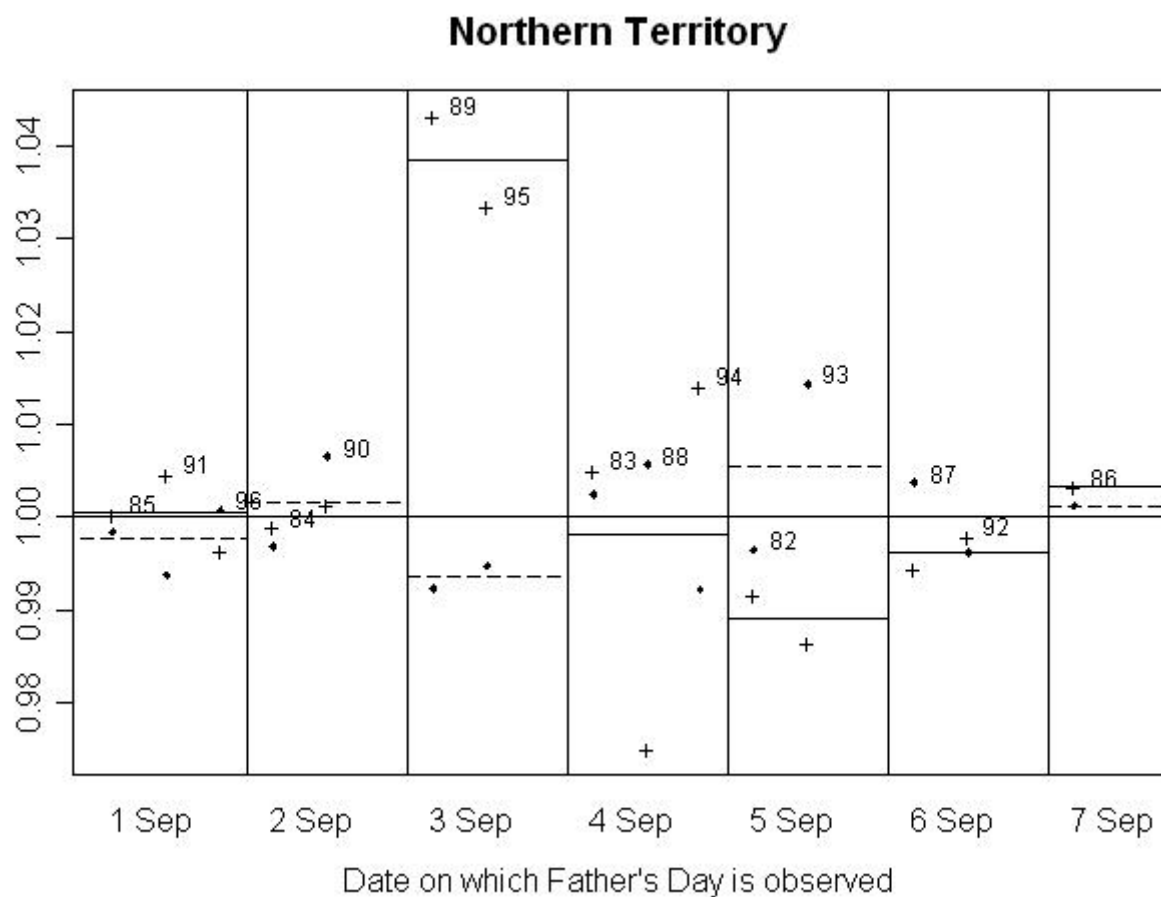
Western Australia



GRAPH 15. RATIO OF SEASONALLY ADJUSTED RETAIL TURNOVER TO TREND, Tasmania

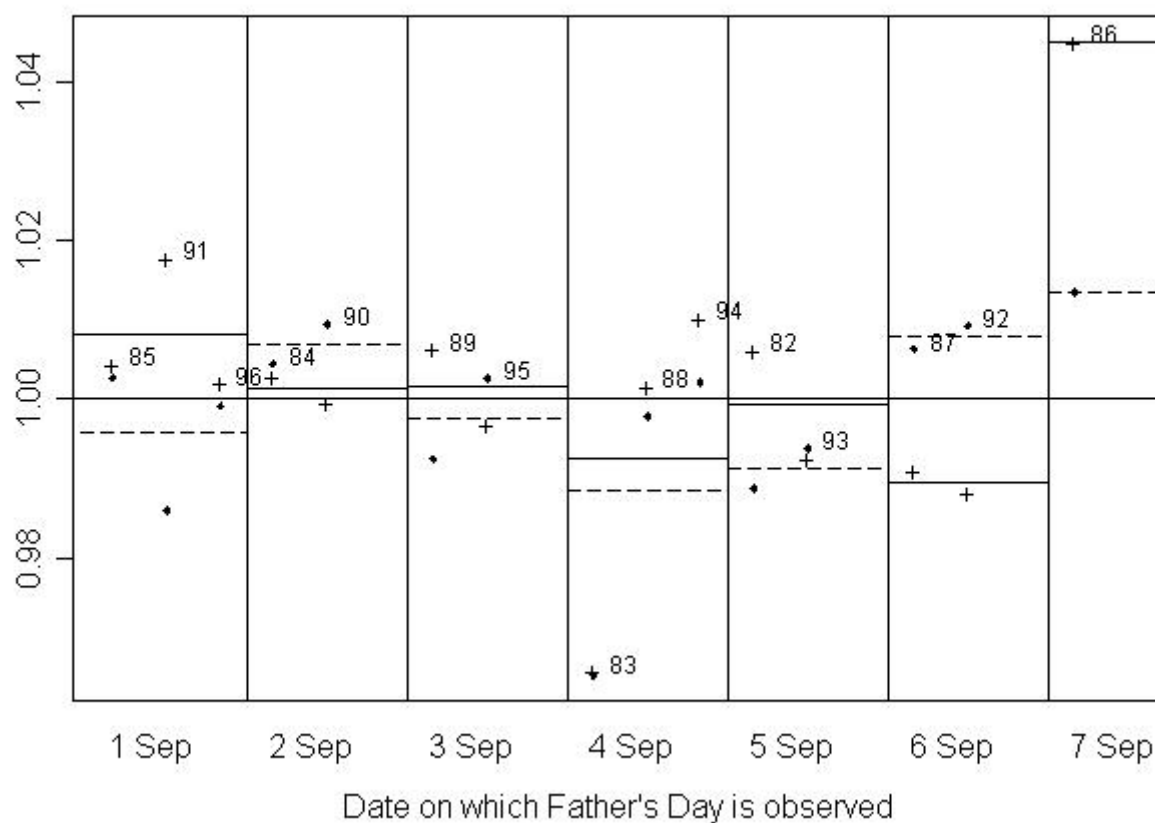


GRAPH 16. RATIO OF SEASONALLY ADJUSTED RETAIL TURNOVER TO TREND, Northern Territory



**GRAPH 17. RATIO OF SEASONALLY ADJUSTED RETAIL TURNOVER TO TREND,
Australian Capital Territory**

Australian Capital Territory



FURTHER INFORMATION

For further information regarding this article, please contact Time Series Analysis Section, on (02) 6252 5132.

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